**Describing and Explaining Enthalpy Changes (Level 3) examiners tips: Read these please!**

• RTQ2 read the question twice…

• look carefully, what enthalpy change(s) is/are being asked about

#### • bond breaking is ENDOthermic ie energy must be taken in

#### • bond making is EXOthermic ie energy is given out, EXITs

• the melting (and boiling points) of a substance indicate the strength of the forces between the particles

in the solid (or liquid) phase be aware that double bonds are stronger (and shorter) than single bonds

and thus, double bonds require more energy to be broken

**Also…”don’t be daft”**

This is Level 3 Chem, you absolutely must include the state symbols

Ensure that you are familiar with the different types of enthalpy changes.

The standard enthalpy of *combustion or formation or reaction or vapourisation or sublimation or fusion* is the enthalpy change when one mole of the substance….

Δ*cH*° … is completely burnt, with all reactants and products in their standard states

Δ*fH*° … is formed from its elements, with all reactants and products in their standard states

Δ*rH*° … is transformed by a chemical reaction

Δ*fusH*° … is changed from a solid to a liquid at the melting point

Δ*subH*° … is changed from a solid to a gas at the sublimation point

Δ*vapH*° … is changed from a liquid to a gas at the boiling point

Standard states are the states of substances at lab temperature (25 *°*C and pressure (1 Atmosphere) SLC

O2, H2 and CO2 are gases

H2O, C2H5OH are liquids

C, S are solids

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